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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RONALD F. RYKOWSKI and
JEFFERY SCOTT HARRIS

Appeal 2009-004176
Application 10/653,559
Technology Center 2600

Before JOSEPH F. RUGGIERO, MARC S. HOFF, and
THOMAS S. HAHN, Administrative Patent Judges.

HAHN, Administrative Patent Judge.

DECISION ON APPEAL[1]

Appellants invoke our review under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1-4, 7-13, 16-26, 29, and 30.[2] We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

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[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE[3]

Appellants claim an apparatus and method for calibrating a visual display having an array of pixels and corresponding subpixels by determining chromaticity and luminance values for registered subpixels. Determined chromaticity and luminance values are converted to measured tristimulus values, and target chromaticity and luminance values for a given color are converted to target tristimulus values. Differences between measured and target tristimulus values are determined to calculate correction factors for each registered subpixel.[4] Claim 1 is illustrative:

1. A method for calibrating a visual display, the method comprising:

(a) analyzing a visual display module, the module comprising an array of pixels and corresponding subpixels;

(b) locating and registering multiple subpixels of the visual display module;

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[2] This appeal is related to commonly owned Appeal No.: 2009-003868 (Application: 10/455,146). We do not concur with the Appellants' nor the Examiner's statements that there is no related appeal "hav[ing] a bearing on the Board's decision in this appeal" (Br. 2; Ans. 3). The submitted arguments for both this appeal and also Appeal No.: 2009-003868 are directed to the same cited art to address substantively similar bases for rejections. We further find the Examiner's discussions in both of the Examiner's Answers "Response to Argument" sections are substantively the same for the two appeals. *See* 37 C.F.R. § 41.37 (c)(1)(ii).

[3] Throughout this opinion we refer for their respective details to the Specification filed Sep. 2, 2003, Appeal Brief filed Mar. 30, 2008, and Examiner's Answer mailed May 16, 2008.

[4] *See generally* Spec. ¶¶ [0002], [0028], [0034], [0035], and [0037]-[0048]; Figs. 1-4, and 7.

(c) determining a chromaticity value and a luminance value for each registered subpixel;

(d) converting the chromaticity and luminance value for each registered subpixel value to measured tristimulus values;

(e) converting a target chromaticity value and a target luminance value for a given color to target tristimulus values;

(f) calculating correction factors for each registered subpixel based on a difference between the measured tristimulus values and the target tristimulus values; and

(g) sending the correction factors to the visual display module.

REJECTIONS[5]

The Examiner relies on the following prior art to show unpatentability:[6]

Watanabe	US 4,825,201	Apr. 25, 1989
McManus	US 5,479,186	Dec. 26, 1995
Greene	US 6,243,059 B1	June 5, 2001
Mendelson	US 6,559,826 B1	May 6, 2003
Cottone	US 6,677,958 B2	Jan. 13, 2004
Ott	US 2004/0066515 A1	Apr. 8, 2004
Hsu	US 2004/0179208 A1	Sep. 16, 2004

[5] A rejection of claim 30 under § 112, first paragraph, (Final Action, mailed July 24, 2007, ¶ 2) is withdrawn (Ans. 16).
[6] Effective filing dates for these documents precede Appellants' earliest effective filing date and are not at issue.

The Examiner, under 35 U.S.C. § 103(a), rejected:

1. Claims 1, 3, 4, 10, 12, 13, 16, and 29 as unpatentable over Greene and Cottone (Ans. 5-8);
2. Claims 2 and 11 as unpatentable over Greene, Cottone, and Mendelson (Ans. 9);
3. Claims 8, 9, 20, 21, and 22 as unpatentable over Greene, Cottone, and Ott (Ans. 9-11);
4. Claims 23 and 24 as unpatentable over Greene, Cottone, Ott, and Hsu (Ans. 11, 12);
5. Claims 7, 17, 18, and 19 as unpatentable over Greene, Cottone, and Watanabe (Ans. 12, 13);[7]
6. Claim 30 as unpatentable over Greene, Cottone, Watanabe, and McManus (Ans. 13-14); and
7. Claims 25 and 26 as unpatentable over Greene, Cottone, Ott, and Watanabe (Ans. 14, 15).

ISSUE

The dispositive issue, based on the Examiner's findings and conclusions and the Appellants' contentions, is whether the Examiner, under § 103(a), erred in combining Greene and Cottone to teach or suggest converting measured subpixel chromaticity and luminance values to measured tristimulus values, and converting target chromaticity and luminance values for a given color to target tristimulus values as recited claim 1.

[7] The statement of rejection (Ans. 12) lists claim 31. No claim 31 is pending and no claim 31 is addressed in the statement of reasons (*id.*). Accordingly, we consider the listing of claim 31 in the statement of rejection to be a harmless typographical error.

ANALYSIS

Claims 1, 3, 4, 10, 12, 13, 16, and 29

Appellants premise their patentability arguments for these claims on limitations recited in claim 1 (Br. 12-20). In part, Appellants assert that the Examiner failed to provide an "apparent rational reason" for combining Greene and Cottone to teach or suggest converting chromaticity and luminance values into measured and target tristimulus values as recited in steps (d) and (e) of claim 1 (Br. 17, 18).

The Examiner acknowledges that Greene does not teach converting chromaticity and luminance values into tristimulus values as recited in steps (d) and (e) of claim 1 (Final Action, p. 3). The Examiner finds Cottone, though, teaches that:

> the conversion between the CIE chromaticity coordinates (x, y) and luminance value Y into the CIE tristimulus value (XYZ) is well known in the art *(Cottone---Col. 5, lines 9-15 and 50-52).* At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to convert the chromaticity and luminance values into tristimulus values as taught by Cottone et al. in the method for calibrating a visual display taught by Greene et al. so as to increase the precision of color/brightness values. Furthermore it is well known that color can be represented in different formats and any known method of defining color/brightness will perform equally well at helping calibrate a display.

(Final Action, pp. 3, 4).

Quoting the Examiner's above discussion directed to combining Greene and Cottone, Appellants argue that "the Examiner has failed to provide any articulated reasoning as to why it would have been obvious to

increase the precision of color/brightness values of Greene according to the combined method of Cottone" (Br. 18). Disputing such arguments, the Examiner states that:

> The reason provided for combining Greene with Cottone (i.e. to increase the precision of color/brightness values) is a valid motivation. Furthermore, the conversion of chromaticity and luminance values to tristimulus values is simply a conversion, like converting radians to degrees. Lastly, tristimulus values are more precise because the values are in one format as opposed to two (i.e. one luminance value and two chromaticity values).

(Ans. 22.) We find the Examiner's remaining discussion (see Ans. 22, 23) to be conclusory statements.

On this record, we are persuaded by Appellants' arguments. Turning to the Examiner's reasoning, we find alternative rationale asserted, namely, (i) "conversion of chromaticity and luminance values to tristimulus values is simply a conversion, like converting radians to degrees;" or (ii) "tristimulus values are more precise because the values are in one format as opposed to two . . ." (Ans. 22).

Concerning the first rationale, Appellants assert that "the Examiner simply alleges that any method of defining color/brightness will perform equally well, without any explanation of how or why this may be the case" (Br. 18). We also do not find that the Examiner has addressed or provided an explanation for how or why conversion to tristimulus values performs equally well as chromaticity and luminance values or another value conversion. Concerning the other rationale, i.e., precision of tristimulus values, the Examiner asserts that "tristimulus values are more precise

because the values are in one format as opposed to two (i.e. one luminance value and two chromaticity values)" (Ans. 22). Again, we do not find that the Examiner has provided reasoning with rational underpinning to support the conclusion that conversion to tristimulus values increases precision for color/brightness values.

Our reviewing court has stated that an Examiner's articulated reasoning for a rejection under § 103(a) must posses a rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Concordantly, the Supreme Court has stated that "'rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'" *KSR Int'l Co. v. Teleflex Inc.* 550 U.S. 398, 418 (2007) (quoting *Kahn*, 441 F.3d at 988).

Based on the record, we find the Examiner erred in modifying Greene with Cottone because we do not find articulated reasoning possessing a rational underpinning to support the combination. In particular, we do not find that the Examiner articulated reasoning for how or why the Cottone conversion to tristimulus values (i) performs equally well as chromaticity and luminance values; or (ii) alternatively increases precision.

For the above reasons, we will reverse the Examiner's rejection of independent claim 1 and also will reverse the rejection of independent claim 10 that substantively recites the same disputed limitations (Br. 20). Further, for the same reasons, we will reverse the

rejection of the claims in this group that are dependent from these independent claims.

Claims 8, 9, and 20-22

I

Appellants argue that dependent claims 8, 9, 20, and 21 are patentable because their base independent claims 1 and 10 are patentable (Br. 21). These dependent claims are rejected under § 103(a) as unpatentable over Greene, Cottone, and Ott (Ans. 9-11). Appellants contend that Ott fails to cure the asserted Greene and Cottone deficiencies (Br. 21). On reviewing Ott, we find that the Greene and Cottone deficiencies are not cured. The Examiner continues reliance on Greene and Cottone as not being deficient for the disputed base independent claim limitations (Ans. 25, 26).

For the reasons discussed *supra*, we will also reverse the rejection of these dependent claims 8, 9, 20, and 21.

II

Appellants argue that independent claim 22 is patentable because the cited references, either alone or in combination, fail to disclose or suggest recited limitations that are similar to the disputed limitations of claim 1 (Br. 21). The Examiner continues reliance on Greene and Cottone as not being deficient (Ans. 25, 26). For the reasons discussed *supra*, we will also reverse the rejection of claim 22.

Claims 2, 7, 11, 17-19, 23, and 24-26

Appellants argue that these dependent claims are patentable because their base independent claims 1, 10, and 22 are patentable

(Br. 20-23). These claims are rejected under § 103(a) as unpatentable over Greene, Cottone, and various combinations with Mendelson, Ott, Hsu, and Watanabe (Ans. 9 and 11-15). Appellants contend that the further references fail to cure the asserted Greene and Cottone deficiencies (Br. 22, 23). (Appellants do not separately argue the patentability of dependent claims 25 and 26, but list these claims in the Conclusion (Br. 24) as being patentable for the prior asserted reasons.) On reviewing the additional references, we find that the Greene and Cottone deficiencies are not cured. The Examiner continues reliance on Greene and Cottone as not being deficient for the disputed base independent claim limitations (Ans. 25, 26).

For the reasons discussed *supra*, we will also reverse the rejections of these dependent claims 2, 7, 11, 17-19, 23, and 24-26.

Claim 30

This is an independent claim rejected under § 103(a) as unpatentable over Greene, Cottone, Watanabe, and McManus (Ans. 13, 14). Appellants argue that the claim is patentable because the cited references, either alone or in combination, fail to disclose or suggest limitations that are similar to the disputed claim 1 limitations (Br. 23). The Examiner continues reliance on Greene and Cottone as not being deficient for the claim 1 disputed limitations (Ans. 25, 26).

For the reasons discussed *supra*, we will also reverse the rejection of claim 30.

ORDER

The Examiner's decision rejecting claims 1-4, 7-13, 16-26, 29, and 30 is reversed.

REVERSED

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